

My Model's Theory of Universals: A Bottom-Up Framework

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Abstract

The classical problem of universals begins with a familiar phenomenon: many distinct particulars appear to be “of the same kind” or to “share a property.” Different apples are red; many figures are triangular; different actions are called just. The central questions are: (i) what explains this sameness across distinct cases (the “one-in-many” question), (ii) whether universals exist and, if so, in what sense and where, and (iii) how our classificatory concepts relate to what exists independently of any one classifier. Traditional answers are commonly grouped as realism (universals are mind-independent in some robust sense), nominalism (there are only particulars and our linguistic or practical groupings), and conceptualism (universals exist as concepts or cognitive structures).

This paper develops an account of universals inside My Model (MM) (Khachatryan, 2023), an epistemically oriented framework with intentionally minimal ontology. MM assumes two ontological commitments: DS (Data System), the thesis that everything that exists can be treated as configuration and dynamics within a single closed system of “data,” and PISC (Principle of Increased Self-Control), a long-run tendency within DS toward increased capacities for reliable regulation and transformation (self-control). In MM’s own methodological spirit, DS and PISC are treated here as chosen ontological models—adopted for explanatory leverage and revisable in principle. Building only on DS and PISC, the paper proposes MMTou (My Model’s Theory of Universals), a strictly bottom-up and model-centric resolution of the universals problem.

MMToU introduces two constructs. A universal is an agent-level data structure that groups encountered particulars under a label or role (for example, “electron,” “triangle,” “red,” “contract”), enabling prediction, inference, and action. An interuniversal is a collective DS subsystem formed when many agents’ corresponding universals become coordinated and stabilized through communication, practice, and shared constraints. Interuniversals explain why certain classifications become widely shared while remaining compatible with variation, disagreement, and vagueness across individuals and communities.

MMToU is explicitly agnostic about deeper mind-independent structures that might exist in DS. In earlier MM discussions, such hypothesized observer-independent regularities were sometimes called S-patterns (structural patterns): stable regularities that might help explain why different agents often converge on similar classifications. MMTou does not assume that S-patterns exist as additional entities; it also does not deny that DS may exhibit robust regularities. Instead,

MMToU explains universals in terms of modeling dynamics, coordination, and the selection effects created by PISC. Realism, conceptualism, and nominalism are then treated as alternative interpretive layers that can be developed later within MMT (My Model Metaphysical Theory), without changing MMToU's bottom-up core.

1. Introduction

1.1 The classical problem of universals

We routinely classify distinct things as “the same kind.” This is not limited to ordinary perception; it also appears in mathematics, physics, and social life.

- Everyday perception: multiple apples are classified as *red* even though they differ in size, shading, lighting conditions, and texture.
- Mathematics and geometry: many drawings are called *triangles*, even though one is scalene, another equilateral, another is drawn imperfectly with slightly curved sides.
- Physics: many distinct experimental events are classified as instances of “electron behavior,” even though each event occurs in a different apparatus with different background conditions.
- Ethics and law: different actions are classified as *just* or as instances of *theft*, even when contexts differ in relevant details.

These examples point to a general structure: there are *particulars* (this apple, that drawing, this measurement event, that action) and there appears to be something “one” that applies across many cases (redness, triangularity, electronness, justice). The philosophical problem is not merely that we use general terms; it is that we seek an account of what, if anything, makes this practice correct, reliable, and explanatory.

The guiding questions can be stated with minimal ambiguity:

1. One-in-many: What explains the fact that many distinct particulars are correctly classified as F (red, triangular, electron, just)?
2. Existence and location: Do universals exist, and if so, in what sense? Are they features of the world, features of minds, or something else?
3. Concept–world relation: When a concept such as *triangle* or *electron* is successful, what does that success consist in? Is it correspondence to a mind-independent universal, or success of a cognitive tool under constraints?

Traditional positions provide familiar types of answers:

- Realism: there are universals or objective kinds in virtue of which particulars are F.
- Nominalism: there are only particulars; “F-ness” reflects naming, resemblance, or classificatory practice rather than an additional universal.

- Conceptualism: universals exist as concepts or cognitive structures; the apparent sameness across many is explained by mental organization rather than mind-independent entities.

Each position captures something important. Realism aims to explain the apparent objectivity and convergence of many successful classifications (for example, the convergence of physical theory on stable categories). Nominalism aims to avoid multiplying entities beyond necessity. Conceptualism aims to respect the central role of cognition in classification. The difficulty is to give an account that explains why some classifications are reliably action-guiding and intersubjectively stable while not requiring an additional ontological realm of universals.

MMToU's strategy is to treat "x is F" not as an intrinsic tag on x, but as a relational classification fact implemented inside modeling systems; later sections make this precise.

1.2 MM's minimal ontology and epistemic orientation

My Model (MM) is designed to keep ontology minimal while treating modeling as central. It adopts two explicit ontological commitments:

1. DS (Data System): the world is treated as a single closed system whose constituents and dynamics can be described as data/configuration. "Objects," "events," "agents," "measurements," and "models" are all subsystems and processes within DS.
2. PISC (Principle of Increased Self-Control): DS exhibits a long-run tendency toward increased self-control—understood here as increased capacity for reliable regulation and transformation. The present paper does not attempt to derive PISC; it uses PISC as a high-level organizing assumption about the directionality of successful modeling and action within DS.

MM is epistemically oriented in the following sense: it aims to explain how knowledge, classification, and meaning arise from the internal dynamics of DS, rather than by appealing to a privileged standpoint that accesses the world "as it is" independently of modeling. This matters for universals because universal-talk is one of the main places where philosophy is tempted to add ontology: if many things are red, perhaps there must be "redness itself." MM does not begin with that move. It begins with DS as the ontic substrate and asks what kinds of internal DS structures are required to produce stable classification and successful action under PISC.

A central consequence is methodological: beyond DS and PISC, MM attempts to do explanatory work primarily with modeling dynamics—how agents compress information, generate expectations, coordinate with each other, and revise their representations in response to feedback.

1.3 Aim and scope of MMToU

The goal of this paper is to formulate MMToU (My Model's Theory of Universals): an account of universals that is fully consistent with MM's minimal ontology and epistemic orientation.

MMToU is defined by three constraints:

1. *Bottom-up construction*: the explanation proceeds from encounters with particulars to agent-level classification structures and then to collective stabilization.
2. *No ontological expansion beyond DS + PISC*: MMToU does not posit a Platonic realm, mind-independent universals as additional entities, or a built-in catalogue of intrinsic properties.
3. *Explicit agnosticism about deeper DS regularities*: MMToU does not assume that DS contains mind-independent universals. It remains open on whether DS exhibits stable observer-independent regularities that might explain convergence of successful classifications.

To express the third constraint precisely, we introduce a term used in earlier MM discussions. S-patterns (structural patterns) refer to hypothesized observer-independent regularities in DS—regularities that could, in principle, help explain why different agents often converge on similar categories (for example, why a range of measurement practices converge on the electron as a stable theoretical kind). MMToU does not require S-patterns as ontological postulates. It treats talk of patterns and regularities as descriptive language about DS behavior unless and until MMMT (My Model Metaphysical Theory) later makes a stronger metaphysical commitment.

Within these constraints, MMToU introduces three key notions:

- *Particulars*: relatively localized DS configurations or processes that agents interact with and attempt to classify (an apple, a drawn figure, a measurement event, an action, a sentence).
- *Universals*: agent-level data structures that group multiple particulars under a label or role, enabling prediction, inference, and action.
- *Interuniversals*: collective DS subsystems formed when multiple agents' corresponding universals become linked and stabilized through communication, shared practice, and institutional or technological structures.

The paper proceeds as follows. Section 2 states the MM principles required for the argument: DS and PISC, the absence of a privileged “God’s Eye” standpoint, modeling as the basis of perception and cognition, relational properties, and epistemic modesty. Section 3 defines particulars, universals, and interuniversals in bottom-up terms. Section 4 uses these definitions to resolve the one-in-many problem and related issues such as vagueness, disagreement, and the classical Third Man regress. Section 5 shows how realism, conceptualism, and nominalism can be treated as interpretations layered on top of MMToU. Section 6 outlines implications and open questions for MMMT.

2. Core MM Principles Relevant to Universals

This section states the minimal set of principles from My Model (MM) that will be used in the argument. The point is not to restate MM in full, but to make explicit the constraints under which

MMToU (My Model's Theory of Universals) will operate. Each principle will later play a defined role in the bottom-up construction of universals and interuniversals.

2.1 DS (Data System) and PISC (Principle of Increased Self-Control) as the ontological core

DS (Data System) is MM's basic ontological claim: everything that exists is part of a single closed system, and everything—objects, events, minds, languages, measurements, institutions—can be treated as configurations and dynamics within that system. In particular:

- An agent (human, animal, machine) is a DS subsystem with internal states and transitions that can build and use models.
- A model is also a DS subsystem: a structured internal configuration that supports expectation, prediction, and guidance of action.
- A social practice (for example, geometry as taught and used, or experimental physics as practiced in laboratories) is likewise a DS subsystem distributed across agents, artifacts, and communication channels.

This matters for universals because it fixes the “place” where universals can exist: if something exists at all, it exists as some DS configuration or dynamic. MMToU will therefore avoid treating universals as entities outside DS.

PISC (Principle of Increased Self-Control) is MM's second ontological commitment. It states, at a high level, that DS tends over time toward increased self-control, where self-control is understood as an increased capacity for reliable regulation and transformation of states. PISC is not used here as a detailed dynamical law. It is used as an orienting principle that explains why certain internal structures—especially modeling structures—tend to be selected, stabilized, and refined.

A simple way to see the relevance is to connect PISC to classification. A system that can *reliably discriminate* between relevant kinds of situations (for example, “edible vs poisonous,” “stable vs unstable,” “signal vs noise”) gains control: it can act in ways that keep it within viable regimes and away from failure modes. Under PISC, such discriminations are not accidental ornaments; they are among the most direct routes to improved regulation.

Example (everyday): An organism that forms a stable internal distinction between “safe food” and “dangerous food” can predict consequences of eating and act accordingly. That classification increases survival-relevant control.

Example (scientific): A community that stabilizes a classification such as “electron” gains predictive and technological control: it can design instruments, interpret data, and build devices whose behavior depends on reliable expectations associated with that category.

2.2 No God's Eye View

MM denies the possibility of a privileged epistemic standpoint that has direct, complete, non-model-based access to DS “as it is in itself.” This is the *No God's Eye View* principle.

Formally stated within MM's vocabulary:

- Every knower is a DS subsystem.
- Any access a subsystem has to anything else in DS occurs via internal processes of interaction, encoding, and reconstruction.
- Therefore, every description of DS is mediated by some model, approximation, compression, or representation internal to a subsystem.

This principle matters for universals in two connected ways.

First, it blocks a shortcut: the idea that universals can be identified by “reading off” intrinsic properties as if they were labels attached to objects. Under No God's Eye View, there is no such direct reading. Classification must be explained as a modeling activity conducted by finite agents under constraints.

Second, it reframes the sense in which universals can be “objective.” If no subsystem has a complete view, then “objectivity” cannot mean “seen from nowhere.” Instead, objectivity must be reconstructed in terms of convergence, stability, robustness, and coordination among many partial views. In MMTou, that reconstruction is carried by interuniversals: stable collective DS structures that enable reliable shared classification without presupposing intrinsic properties.

Example (measurement): A physicist does not observe “electronness itself.” They observe instrument readings, tracks, scattering patterns, and statistical regularities. The category “electron” is a structured way of modeling and unifying those interactions, not a tag visibly attached to an object.

Example (geometry): A person does not perceive “triangularity itself.” They encounter drawn shapes with imperfections and classify them as triangles relative to a concept that abstracts away from irrelevant variation.

2.3 Perception and cognition as modeling

MM treats perception and cognition as forms of model building within DS. This is an explanatory claim: what an agent “takes the world to be” is constituted by internal structures that summarize interaction histories and support expectations.

In this paper, modeling will be used in a minimal and precise sense:

- A *model* is an internal structure of an agent (a DS subsystem) that (i) compresses information about interactions, (ii) supports expectations about future interactions, and (iii) can guide action.

A model may be explicit (a symbolic theory, a written definition) or implicit (a learned neural representation, a trained perceptual disposition). MMTou does not require models to be linguistic or consciously accessible.

This principle is central to MMTou because it identifies the ontological category to which universals belong: universals are a special class of models, namely, models that perform classification and re-identification across distinct cases.

Example (implicit model): A child learns to sort objects into “ball” and “not ball” long before they can define a ball. The universal here is a learned internal structure that supports reliable grouping and expectations (balls roll, bounce, can be thrown).

Example (explicit model): A mathematician’s definition of “triangle” functions as a model that determines classification conditions and supports derivations. This explicit universal is embedded in a larger network of mathematical practices and proofs.

2.4 Relational properties and anti-intrinsicism

MM adopts relational properties and rejects intrinsicism about properties, at least as a default stance. These terms require careful definition.

- A property is *intrinsic* (in the strong metaphysical sense) if it is an observer-independent feature that an object has “in itself,” not essentially involving relations to other things or to modeling practices.
- A property is *relational* if its attribution depends on relations—relations among DS configurations, or relations between a DS configuration and an agent’s model, measurement setup, or classificatory practice.

MM’s stance can be stated as follows:

1. DS contains configurations and relations that evolve under PISC.
2. “Property talk” (“x is F”) is not the attachment of an intrinsic tag to a configuration. It is a relation involving:
 - a DS configuration or process,
 - a model that specifies a classificatory role F,
 - and a context of use (aims, constraints, purposes, and feedback conditions).

Equivalently, “x is F” abbreviates: *x stands in the F-classification relation to an agent’s universal within a context stabilized by an interuniversal.*

This does not mean that property attribution is arbitrary. It means that the metaphysical unit of analysis is not “object + intrinsic property” but “configuration + relations + modeling practice.” The same DS configuration can fall under different classifications depending on the model and context, and different configurations can fall under the same classification when the model treats certain differences as irrelevant.

Example (color): The classification “red” depends on illumination, sensory apparatus, and practical thresholds. A spectral distribution may be classified as red under one lighting condition and not under another. The universal “red” functions as a model that sets equivalence classes relative to an agent’s perceptual and practical context.

Example (kinds in physics): The category “electron” is tied to measurement interactions and theoretical roles (charge, mass, behavior in fields). The relevant “properties” are not accessed as intrinsic labels; they are stabilized through experimental and theoretical practices that define what counts as an electron in operational and inferential terms.

2.5 Epistemic modesty and ontological restraint

MMToU adopts epistemic modesty and ontological restraint as explicit methodological principles.

- *Epistemic modesty:* our models are finite, historically conditioned, and revisable; their success is local and fallible. This principle does not imply skepticism. It implies that even highly successful models should not be automatically converted into claims about a complete inventory of “what exists in itself.”
- *Ontological restraint:* do not introduce new ontological entities when the explanatory work can be done with DS + PISC + modeling dynamics.

This is the point at which S-patterns (structural patterns) become relevant again. In MM discussions, “S-patterns” refer to hypothesized observer-independent regularities in DS—regularities that might help explain why certain classifications converge across agents. MMToU’s stance is:

- MMToU permits descriptive talk of “regularities” and “patterns” in DS behavior.
- MMToU does not treat such talk as a commitment to a separate ontological category of universals.
- Whether DS contains robust observer-independent regularities that deserve a realist interpretation is deferred to MMT (My Model Metaphysical Theory) as an optional later development.

MMToU will explain the phenomenon of universals using only three resources:

1. DS as the substrate in which agents and models exist,
2. modeling as the mechanism of classification and re-identification,
3. PISC as the principle that accounts for why certain modeling structures are selected and stabilized (individually and collectively).

3. The Bottom-Up Machinery: Particulars, Universals, Interuniversals

This section defines the three core notions used by MMTou (My Model's Theory of Universals): particulars, universals, and interuniversals. The definitions are designed to satisfy the constraints stated in Sections 1–2: minimal ontology (DS (Data System) + PISC (Principle of Increased Self-Control)), the No God's Eye View, and a model-centric account of classification.

3.0 A compact schematic (“pipeline”) of the MMTou mechanism

MMTou explains universal-talk as a bottom-up construction in DS:

1. *Encounters with particulars*: agents interact with relatively localized DS configurations (objects, events, actions, representations).
2. *Formation of universals*: each agent forms internal classificatory data structures that group encountered particulars under labels/roles for prediction and action.
3. *Stabilization into interuniversals*: through communication, coordination, training, institutions, and shared constraints, many agents' corresponding universals become linked and partially aligned, forming a collective DS subsystem.
4. *Stabilized practice*: the interuniversal supports shared meaning, teachability, procedures for managing disagreement, and practical success, which in turn feeds back into how agents revise their universals.

This schematic is a decomposition of explanatory roles: it says where, within DS, the relevant structures exist and how they connect to each other.

3.1 Particulars (as MMTou uses the term)

Definition (Particular). For the purposes of MMTou, a *particular* is a relatively localized DS (Data System) configuration or process that an agent can interact with and attempt to classify.

“Relatively localized” is intentionally flexible. A particular may be:

- a concrete object (an apple, a rock, a circuit board),
- an event (a flash in a detector, a collision in a simulation, a transaction),
- an action (signing a contract, making a promise),
- a representation (a drawn figure, a sentence, a digital image),
- or a structured episode (a laboratory run, a proof step, a diagnostic test).

MMTou is deliberately neutral about deeper metaphysical questions concerning particulars. It does not assume that particulars are “instances of” mind-independent universals, and it does not assume that DS comes with a built-in catalogue of intrinsic properties. MMTou requires only that agents encounter stable-enough local structures to support classification and re-identification.

3.2 Universals (agent-level constructs)

Definition (Universal for an agent). Let **A** be an agent (a DS subsystem capable of modeling). A *universal* U_A^F for **A** associated with a label **F** is a data structure within **A** that:

1. Clusters multiple encountered particulars together as falling under **F**, and
2. Supports prediction, inference, and action by treating those particulars as relevantly similar for **A**'s purposes.

Key features:

1. Universals are internal models. They are part of an agent's modeling apparatus, not entities outside modeling. They are agent-owned (private in the ownership/control sense), though not necessarily private in the access sense.
2. Universals compress experience. They ignore some differences among particulars and preserve others, in a way that is useful for prediction and action.
3. Universals are finite and fallible. Because agents are finite, universals are always limited and can misclassify.
4. Universals are revisable. Feedback, error, and improved control can lead to modification or replacement of a universal.
5. Universals are not classical realist universals. MMTou does not treat universals as mind-independent entities. A universal, in MMTou's strict sense, exists as an internal DS structure of an agent.

Examples:

- Everyday category: "chair" groups diverse objects under a role that supports expectations ("I can sit on it").
- Mathematical category: "triangle" may be explicit and inferentially rich for a mathematician, and implicit and prototype-driven for a student.
- Scientific kind: "electron" is a structured internal model connecting detector events, theoretical roles, and inferential expectations.

3.3 Interuniversals (collective constructs)

Definition (Interuniversal for a collective). Let **G** be a group of agents (a community, institution, discipline, or any interacting population). For a label **F**, an *interuniversal* I_G^F is the DS subsystem formed by (i) the structured aggregation and interaction of the participating agents' **F**-universals, together with (ii) the DS resources that link, partially align, transmit, and stabilize those universals across **G**.

This includes shared language, pedagogy, textbooks, diagrams, definitions, measurement procedures, instruments, standards, institutions, and other DS resources that enable coordination. An interuniversal is a collective, distributed DS structure that supports reliable shared classification without presupposing intrinsic properties.

A clarification about “privacy”: each agent’s universal is “private” only in an ownership/control sense (owned by that agent, who alone can create, modify, or delete it). A universal need not be private in an access sense; other agents may be able to access and “read” another agent’s universal in principle.

Interuniversals can be multi-resolution and sometimes hierarchical: the same interuniversal may contain different aggregated nodes at different levels of precision, with different subgroups coupling to different nodes.

Examples:

- *Triangle*: strict Euclidean definitions and proof norms coexist with looser everyday uses and teaching heuristics.
- *Electron*: shared theoretical constraints, standardized procedures, instrument designs, and training regimes stabilize classification across practitioners.

4. How MMToU Resolves the Problem of Universals (Bottom-Up)

Section 3 introduced three components of the MMToU mechanism: particulars (encountered DS configurations), universals (agent-owned classificatory data structures), and interuniversals (collective DS subsystems that stabilize and align universals via shared resources and coordination). This section uses that machinery to answer the classical questions directly and to show how the main puzzles arise, and dissolve, under MMToU’s constraints.

4.1 The one-in-many question

In MMToU, there is no further metaphysical operation—no “sharing” relation grounded in a mind-independent universal—over and above two DS facts.

First, at the agent level, an agent forms a universal U_A^F that groups encountered particulars as **F** for prediction, inference, and action. Second, at the collective level, a group stabilizes an interuniversal I_G^F that aligns many agents’ U_A^F -type structures sufficiently for reliable communication and coordinated practice.

Thus, the “one” in “one-in-many” is a stabilized classificatory role realized in DS: first privately (as an agent-owned universal), then intersubjectively (as an interuniversal). In MMToU, the interuniversal is the DS-level structure that constitutes what it is for a classification to be shared and stabilized across agents.

Example (color). Many apples are classified as “red.” The stability of this one-in-many phenomenon is explained by (i) agent-level universals that treat a range of sensory inputs as

relevantly similar for practical purposes, and (ii) community-level interuniversals that stabilize shared usage through language, exemplars, and training.

Example (electron). Many distinct measurement events are classified as involving an electron. Here the stabilizing interuniversal includes shared mathematical roles, standardized measurement procedures, instrument designs, and professional training that align practitioners' classifications.

4.2 Where do universals “exist”?

MMToU answers the location question without adding new ontological tiers.

- A universal exists as an agent-owned DS structure (a subsystem of the agent's MM (My Model)).
- An interuniversal exists as a collective DS structure (a network of agent-owned universals plus the shared stabilizing resources that link and align them).

There is no “realm of universals” outside DS, and there is no catalogue of intrinsic properties attached to things independently of modeling. What exists, in the relevant explanatory sense, are modeling structures and the relations that connect them.

4.3 Concepts, truth, and error without top-down universals

A common concern about bottom-up approaches is that they may collapse correctness into habit. MMToU avoids that collapse by making evaluation criteria explicit and DS-internal, while tying them to PISC (Principle of Increased Self-Control).

A universal U_A^F is adequate for an agent **A** to the extent that it:

1. supports reliable prediction across the contexts where **A** applies it,
2. remains coherent with **A**'s other modeling practices, and
3. contributes to effective action and control (in the PISC sense).

Error is not “failure to mirror a mind-independent universal.” It is systematic predictive failure, incoherence with broader modeling, or loss of control under feedback. When these failures arise, universals are revised or replaced.

MMToU can acknowledge strong convergence and stability of some universals and interuniversals—especially in mature sciences—without turning that convergence into a metaphysical posit at the MMToU level. Whether unusually strong convergence is best interpreted as evidence for observer-independent S-patterns (structural patterns) is deferred to MMT (My Model Metaphysical Theory).

4.4 Vagueness, disagreement, and pluralism

MMToU predicts vagueness, disagreement, and pluralism as normal outcomes of how interuniversals form and persist.

- Vagueness arises when an interuniversal is multi-resolution: different aggregated nodes serve different purposes, leaving borderline cases and context-dependent thresholds.
- Disagreement arises when agents' universals remain distinct yet sufficiently aligned for partial coordination, or when different communities stabilize competing interuniversals associated with the same word.
- Pluralism follows when multiple schemes carve a domain in different but practically successful ways, serving distinct predictive and control-relevant aims.

Example (triangle). A geometer's "triangle" universal is anchored to strict definitions; a student's or layperson's is anchored to prototypes and looser visual criteria. The interuniversal accommodates both through different aggregated nodes. Borderline cases—stylized icons, rounded-corner figures—are expected. Disagreement reflects divergence of nodes, not failure to detect an intrinsic property.

4.5 The Third Man and regress problems

The classical Third Man Argument is driven by treating **F**-ness as a fixed intrinsic property that can be possessed in the same way by both particulars and a universal. If that is the starting point, it becomes tempting to treat the universal as a peer item that also "has" **F**, and the regress begins.

MMToU blocks the regress by rejecting the presupposition that makes the argument start: that things "have" fixed intrinsic properties as tags, and that a universal is a peer item that has the property in the same sense as its instances. MMToU replaces this with relational properties (Section 2.4): "x is **F**" is shorthand for a relational fact involving a DS configuration, an agent-level universal, and a context of use stabilized by an interuniversal. With intrinsic property-attribution removed from the explanatory base, the regress-producing inference does not arise.

A worked example (the relational schema in use). Suppose a child points to a road sign and says, "That is a triangle." On MMToU's analysis, this is not a report that the sign bears an intrinsic tag "triangularity." It is a relational classification fact: the particular sign (a DS configuration) is placed by the child's agent-owned triangle universal into the **F**-class under a context stabilized by the community's triangle interuniversal (language, schooling, typical exemplars, and shared habits of drawing and labeling). If a geometer objects—"It is not a triangle; the corners are rounded"—MMToU explains this as a difference in which interuniversal node is governing the context (a strict definitional node versus an everyday prototype node), not as a dispute about whether an intrinsic property is literally present. The same structure generalizes to "electron" in physics: classification is stabilized by an interuniversal that includes instruments, procedures, and inferential roles, rather than by direct access to a mind-independent universal entity.

5. Realism, Conceptualism, and Nominalism as Interpretations over MMTToU

MMTToU provides a bottom-up mechanism—particulars, universals, interuniversals—and a relational account of properties. The classical debate between realism, conceptualism, and nominalism can then be reframed as a debate about how to interpret the stability and success of that mechanism, rather than as a debate about what machinery must exist.

5.1 MMTToU's official stance: epistemic core, ontological minimalism

MMTToU's core commitments are:

1. Ontological commitments: MMTToU commits only to DS (Data System) and PISC (Principle of Increased Self-Control) as ontological postulates, plus the existence of agents and their models as DS subsystems. However, within MM's broader methodology, even DS and PISC should be read as chosen ontological models: adopted because they organize explanation effectively, and revisable in principle if stronger reasons emerge to replace or modify them.
2. Universals: agent-owned classificatory DS structures.
3. Interuniversals: collective DS subsystems linking and stabilizing many such universals.
4. Properties: relational classification facts, not intrinsic tags.
5. Agnosticism about S-patterns: neutrality on observer-independent S-patterns (structural patterns) as an MMT-level issue.

MMTToU is therefore a theory of how universal-talk functions inside DS under PISC without adding a Platonic realm or an additional ontological category of mind-independent universals.

5.2 A realist reading (MMMT-level)

A realist interpretation becomes attractive when one asks why some interuniversals converge so strongly and remain robust across instruments, cultures, and historical change. The realist proposal is that the stability and success of certain interuniversals is best explained by robust DS regularities—regularities that do not depend on the classificatory choices of any particular agent.

Within MM vocabulary, such regularities may be described as S-patterns (structural patterns). On this reading, S-patterns are not a separate realm of Forms; they are stable constraints on DS behavior that make some classificatory schemes sustainably successful. This move is optional, belongs to MMT (My Model Metaphysical Theory), and does not alter MMTToU's internal mechanism.

5.3 A conceptualist reading

A conceptualist interpretation emphasizes universals as cognitive tools and interuniversals as shared conceptual infrastructures. "World-contact" is supplied by the success criteria internal to MMTToU: prediction, coherence, and PISC-guided improvement in control. On this reading, the

impressive stability of some interuniversals (for example, in mathematics) is explained primarily by explicit definitions, inferential roles, and powerful error-correction practices, rather than by positing mind-independent universals.

5.4 A nominalist reading

A nominalist interpretation denies mind-independent universals and treats universals/interuniversals as DS-realized patterns of labeling and use. On this reading, universals and interuniversals can be regarded as fully accounted for by regularities in classification together with the social, material, and institutional mechanisms that stabilize those regularities (education, shared language, measurement standards, institutional enforcement, and so on). What exists are particulars and the DS structures that implement naming and coordination, not additional universal entities.

5.5 MMTou as a unifying schema

MMTou supplies a common structure; realism, conceptualism, and nominalism become alternative interpretive layers about why some interuniversals stabilize and succeed. The point of MMTou is not to end the interpretive debate by fiat, but to provide a bottom-up core that makes the decision points explicit and keeps ontological commitments minimal at the MMTou stage.

6. Implications for MMT and Open Questions

MMTou is intentionally minimal in ontology, but it aims to be precise about explanatory structure. This section clarifies how MMTou functions as a component of MMT (My Model Metaphysical Theory) and identifies open questions that follow naturally once universals are treated as DS-internal modeling structures guided by PISC.

6.1 MMTou as a building block of MMT

MMTou contributes to MMT in four main ways.

First, it supplies a relational framework for kinds and properties: “x is F” is analyzed as a classification relation within a modeling system rather than as intrinsic property-attribution. This provides MMT with a stable basis for rephrasing many disputes about properties as disputes about how classification structures form, align, and persist.

Second, it offers a DS-level account of shared meaning via interuniversals. Shared meaning is not treated as mysterious coordination “in the air,” and it is not treated as access to mind-independent universals. It is treated as a collective DS subsystem—distributed across agents and artifacts—that has real causal and explanatory roles.

Third, it provides a principled place for interpretive pluralism. Different domains may justify different MMT-level interpretations: a realist interpretation might be more attractive in parts of fundamental physics, while a conceptualist or nominalist interpretation may be adequate for many everyday categories. MMT_U allows these choices without requiring changes to the core universal/interuniversal mechanism.

Fourth, it preserves methodological continuity with MM: DS and PISC function as the ontological core of MMT_U, yet they remain ontological models—adopted for explanatory leverage and revisable in principle—consistent with MM’s epistemic modesty.

6.2 Open research directions

6.2.1 Technical directions

A natural technical program is to model the dynamics of universals and interuniversals under constraints and feedback.

- Dynamics of universals: How do agent-owned universals evolve under success/failure signals, limited computational resources, and coordination demands? Under what conditions do they converge, fragment, or reorganize?
- Formal representations of interuniversals: What formal structures best represent interuniversals—graphs of partial alignment, fuzzy clusters, hierarchies of aggregated nodes, or hybrids of these? How should alignment be measured in practice?
- Stability and reorganization: What explains long periods of stability punctuated by rapid reorganization (for example, conceptual change in science or law)? When do local revisions propagate to reshape an interuniversal, and when are they absorbed without systemic change?

6.2.2 Philosophical directions: when is a realist interpretation warranted?

MMT_U remains agnostic about observer-independent S-patterns (structural patterns); MMT must decide when a realist interpretation is explanatorily superior. On MMT_U’s own terms, this is not a question about changing the universal/interuniversal mechanism; it is a question about which MMT-level interpretation best explains the stability and convergence of that mechanism in a given domain.

6.2.3 Mathematics and fundamental physics as test cases

Two domains are especially important because they create the strongest temptation toward stronger realism.

- *Mathematics*: Mathematical interuniversals are unusually precise, stable, and error-correcting. A central question for MMT is whether bottom-up stabilization through definitions and proof norms is sufficient, or whether a stronger realist interpretation is warranted.

- *Fundamental physics*: Physics seeks models that remain robust under wide variation of measurement context. If any domain invites an MMT-level realist interpretation of DS structure, this is it. MMTToU makes this pressure point explicit while leaving the mechanism unchanged.

7. Conclusion

MMTToU (My Model's Theory of Universals) resolves the classical problem of universals without adding ontological entities beyond DS (Data System) and PISC (Principle of Increased Self-Control). It explains universals as agent-owned classificatory data structures and explains shared universals as interuniversals: collective DS subsystems that stabilize and align those structures through communication, practice, and material and institutional resources. By treating properties as attached to relations within modeling systems rather than as fixed intrinsic tags on things, MMTToU dissolves regress arguments such as the Third Man Argument at their source.

At the same time, MMTToU leaves space for multiple metaphysical interpretations—realist, conceptualist, nominalist—to be developed within MMT (My Model Metaphysical Theory). The central promise is methodological: MMTToU provides a clear bottom-up core that can support further theorizing while preserving MM's epistemic modesty and ontological restraint, including the principle that even the ontological core (DS and PISC) is best understood as an ontological model adopted for explanatory work and revisable in principle.

References

Khachatryan, A. (2023). My Model, a Metaphysical Framework. <https://archive.org/details/my-model-2025-0523>.